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ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO 90C (Rev 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Amendment filed on 08/10/04*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

　　a)☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

4)☐ Interview Summary (PTO-413) Paper No(s). _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other:

DETAILED ACTION

Claim Objections

Claim 4 is objected to because of the following informalities:

In claim 4, "**ace**" on line 3 should be deleted for meaning consistency . Appropriate

correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

Claims 1, 2, 3, 5, 6, 8, 9, 20, 21, 22, 23, 25 are rejected under 35 USC 103(a) as being

unpatentable over Pithawala et al. (US Pat. No. 6,747,957 B1) in view of Donahue (Pat.

5,835,721).

In claims 1, 2, 5, 8 and 20-22, Pithawala et al. disclose, in Fig.2, a monitor device 250 (

user computer) automatically transmits PING requests to router 210 of network 200 to determine

network availability by monitoring ping responses received (automatically sending from a user

computer via a router a request to which a response is expected). The network access is

determined availability if the ping response is received in a defined period of time, otherwise the

network access is failed if there is no response received (determining whether the response has

been received). Failure information regarding the period of network unavailability is

automatically performed by the monitor device 250 (notification message indicating network

unavailable performed by the user computer). See col.10, line 60 to col.11, line 30. The monitor

device periodically transmits ping requests at interval, and a ping response returned for every 2

pings that were sent is counted as a success (periodically sending the ping request to a network

via a router; and determining whether the response has been received).See col.6, line 40 to col.7,

line 5. The monitor device 250 is decribed as a computer system 812 comprising a display 805

and may be operated in a stand alone computer specially adapted to monitor network availability.

Therefore, the monitor device 250 should be configued as a user computer (see col.5, lines 1-15

& lines 45-47). Pithawala et al. does not disclose displaying the notification message on the user

computer indicating that the network access is unavailable. Donahue et al. discloses, in Fig.6 &

13A, a first computer 2 continuouslly monitors network access to determine whether a second

computer 6 is available. If the second computer 6 is not available, a message is displayed on the

screen of the first computer 2 (pop-up window) indicating that the second computer 6 is not

available (displaying the notification message on the user computer indicating that the network

access is unavailable). See col.7, lines 40-55 & col.9, lines 25-40. Donahue further discloses, in

Fig.8, 13B if the second computer 6 has regained its availability after had been unavailable, the

message is displayed on the screen of the first computer indicating that the second computer has

been available (claim 8, displaying a notification message indicating the network access has been

restored). See col.9, lines 40-55). Therefore, it would have been obvious to one ordinary skill in

the art to use the teaching of Donahue et al.to display the notification message on screen of

monitor device 250 of Pithawala in order to monitor router from being unavailable in a network.

The motivation is to assist network engineers in pinpointing root causes of network problem.

In claim 3, Pithawala et al. disclose, in Fig.5, the ping request is sent to a router having

Ip address (IP address is used as a destionation address for the Ping command). See col.10, lines

5-15.

In claims 6 and 23, Pithawala et al. discloses, in Fig.8, a computer system representting

the monitor device implemented by computer executable instructions (software), computer

readable instructions (implementing computer software in user computer). See col.5, lines 1-15.

In claim 9, Pithwala et al. discloses the Ping request is used with Internet

control message protocol (ICMP) and transmitted to network 200 (network is the internet). See

Abstract.

In claim 25, Pithawala et al. discloses the monitor device 250 with embeded software

automatically monitors network access. Therefore, when the monitor device is booted, it

automatically and periodically launches its embeded software to check the network access (see

col.5, lines 1-12). Therefore, it would have been obvious to one ordinary skill in the art to

launch the embeded sofware stored on the monitor device 250 so that when the user computer is

first booted, the loaded programs is automatically launched to perform the testing for network

connectivity.

Claims 26 are rejected under 35 USC 103(a) as being unpatentable over Pithawala et al.

(US Pat. No. 6,747,957 B1) in view of Welder (US pat. No. 6,622,179 B2).

In claim 26, According to the specification, page 4, line 6, the multi-tasking operating

system is described as windows 2000, Unix or Linux. Therefore, examiner equates the multi-

tasking computer operating system as Unix or Linux. Pithawala et al. does not disclose

computer software is operable within a multi-tasking computer system. Welder discloses the

computer 100 using operating system comprising Unix, Linux, Windows 95, 98, NT, etc.

(computer software is operable within a multi-tasking computer system). See col.7, lines 7-18.

Therefore, it would have been obvious to one ordinary skill in the art for the user computer in

Pithawala et al. to use any of the operating systems comprising Unix, Linux, Windows 95, 98,

NT, etc. The reason is that operating system of a computer comprises a set of soft ware programs

that perform tasks desired by a user.

Claims 7 and 24 are rejected under 35 USC 103(a) as being unpatentable over Pithawala

et al. (US Pat. No. 6,747,957 B1) in view of Donahue (Pat. 5,835,721), and further in view of

Southgate (US pat. No. 6,205,579 B1).

In claims 7 and 24, Pithawala et al. does not disclose the software is downloaded from the

Internet. **Southgate** discloses, in fig.3, step 314, a user accesses Internet to download a new

version of software to upgrade his computer 's current software (download the software from the

Internet). See col.6, lines 40-50. Therefore, it would have been obvious to one ordinary skill in

the art to implement the method by which the user computer's software is upgraded from internet

into Pithawala et al. so that the use computer can download newer version of software from

Internet, thereby avoiding the use of floppy disks or CD ROMs to download. In addition, by

downloading software from Internet, the Ip address used in transmitting the PING command is

easily changed by the requesting users.

Claim 4 is rejected under 35 USC 103(a) as being unpatentable over Pithawala et al. (US

Pat. No. 6,747,957 B1).

In claim 4, examiner would like to point out that According to the specification , page 7,

lines 5-10, the secondary IP address is "PINGed" when no response from the previous PING

with first Ip address is received. The purpose of sending secondary Ip address is to ascertain that

whether the Internet (network access) is indeed down, not just the first or the second Ip address

that is not responding. Pithawala et al. discloses, in Fig.6, the Ping request with Ip address is

periodically and automatically transmitted to router and a response is expected to be received. If

no response is received, the ping request is still being sent. It is a well-known skill in the art that

every time the Ping request is transmitted, an IP address is attached and sent out. Therefore, It

would have been obvious for the ICMP ping request to comprise Internet protocol addresses to

determine whether the router has been accessed or unavailable.

Claims 10, 14, 15, 16, 27, 29, 31, 32, 33 are rejected under 35 USC 103(a) as being

unpatentable over Kaffine et al. (US Pat. No. 6,654,914 B1) in view of Gidwani (US Pat. No.

6,640,239 B1).

In claims 10 and 27, Kaffine et al. discloses, in Fig.1, a network 10 having a user home

12 comprising a plurality of user computers 28, 38, 46 and 52 (a network having a plurality of

user computers). See col.5, lines 22-45. The user PC 52 transmits data over DSL line 58,

DSLAM 68, router 64 to an Internet 24 (DSL carrying data from at least one user computer via

DSL, DSLAM , router over Internet). See col.5, lines 19-21 & 34-37 & 45-57. Telephone 56

transmits voice through DSL 58 (DSL carrying voice signals from a telephone). Refer to Fig.10,

at stages 248 & 256, a user 140 with an attached Internet diagnostic unit (IDU) (see col.7, lines

1-5), repeatly transmits a PING request toward the DSLAM 68, router 64, Internet 24 and waits

for an expected reply packet in response to the PING (periodically sending from at least one

user computer towards a DSLAM a request via a router to which a response is expected). See

col.14, lines 17-27 & 55-56. At stage 250, the reply is determined if it has been received at the

subscriber by checking at a predetermined time-out period (determining if the response is

received). See col.14, lines 22-25. If at the time-out period and the response has not been

received, the destination is determined not currently reachable (a first notification message to the

user when no response is received). See col.14, lines 25-26. The response is received at stage 258

and is displayed at user window 267 on the user 140 (displaying a second notification message

on the use computer when the response is received). See col.14, lines 59 - 67 & col.15, lines 1-7.

Kaffine et al. does not disclose that the request is being sent throught the router that is located in

a path of communication between the user computer and the DSLAM. Gidwani discloses, in

Fig.1, a CPE Lan 118 communicates to a router 118 that is located in a path of communication

between the CPE Lan 118 and DSLAM 134 (router that is located in a path of communication

between the user computer and the DSLAM). See col.21, lines 20-45. Therefore, it would have

been obvious to one ordinary skill in the art to have the DSLAM in Kaffine et al. as sugggested

by the Gidwani to transmit ping request through router to the DSLAM. The motivation is to

monitor the network router to determine that the network access is reachable.

In claim 15 and 32, **Kaffine et al.** discloses, in Fig.10, a response message sent to user is

displayed in window 267 (displaying a notification message comprising a pop-up window). See

col.15, lines 1-10.

In claim 29, **Kaffine et al.** discloses the PING request (PING command). See col.14,

lines 17-24.

In claims 16 and 33, **Kaffine et al.** discloses the invention provides computer program instructions installed in computers (implementing computer software in user computer). See col.3, lines 8-15. One example is hardware with associated software programs with instructions to perform functions to determine problems in network 10. See col.6, lines 58-62.

In claims 14 and 31, the limitations of these claims have been addressed in claim 4.

Claims 11, 12 , 28 are rejected under 35 USC 103(a) as being unpatentable over **Kaffine et al.** (US Pat. No. 6,654,914 B1).

In claim 11, **Kaffine et al.** discloses, in Fig.10, at stages 248 & 256, a user 140 repeatly transmits a PING request toward server 22(see Fig.1) (periodically sending from at least one user computer a request). See col.14, lines 17-23. **Kaffine et al.** does not disclose the request is sent every 5-10 minutes. It is a well-known skill in the art to set a period between subsequent requests depends on how often the IP traffic is congested. For example, if the user 's IP traffic is less congested (mostly reachable), the request can be sent every 5 or 10 minutes. If the user's IP traffic is often congested (mostly unreachable), the request is sent every 1 or 2 minutes. Therefore, it would have been obvious to one ordinary skill in the art to send the request in the system of **Kaffine et al.** every 5 or 10 minutes in order to monitor the connectivity of IP traffic through routers. Another purpose is to keep the router in operation status by repeatly sending requests from the users.

In claim 12, **Kaffine et al.** discloses the PING request (PING command). See col.14, lines 17-24.

In claim 28, **Kaffine et al.** discloses, in Fig.10, at stages 248 & 256, a user 140 repeatly transmits a PING request toward server 22(see Fig.1) (periodically sending from at least one

user computer a request). See col.14, lines 17-23. **Kaffine et al.** does not disclose the request is

sent every 5-10 minutes. It is a well-known skill in the art to set a period between subsequent

requests depends on how often the IP traffic is congested. For example, if the user 's IP traffic is

less congested (mostly reachable), the request can be sent every 5 or 10 minutes. If the user's IP

traffic is often congested (mostly unreachable), the request is sent every 1 or 2 minutes.

Therefore, it would have been obvious to one ordinary skill in the art to send the request in the

system of **Kaffine et al.** every 5 or 10 minutes in order to monitor the connectivity of IP traffic

through routers. Another purpose is to keep the router in operation status by repeatly sending

requests from the users.

Claims 13, 30 are rejected under 35 USC 103(a) as being unpatentable over **Kaffine et
al.** (US Pat. No. 6,654,914 B1) .

In claims 13 and 30, **Kaffine et al.** discloses the PING request with IP address is repeatly

sent at stage 248 via Internet 24. Even though **Kaffine et al.** does not explicitly disclose the

destination IP address is specified in the IP address, but the structure of IP address as understood

in the art including a source IP address as well as destination IP address therein.

In claim 19, the limitation of this claim has been addressed in claim 7.

Claims 17, 18, 34 and 35 are rejected under 35 USC 103(a) as being unpatentable over

Kaffine et al. (US Pat. No. 6,654,914 B1) in view of **Welder** (US pat. No. 6,622,179 B2).

In claims 17 and 34, According to the specification, page 4, line 6, the multi-tasking

operating system is described as windows 2000, Unix or Linux. Therefore, examiner equates the

multi-tasking computer operating system as Unix or Linux. **Kaffine et al.** does not disclose

computer software is operable within a multi-tasking computer system. **Welder** discloses the computer 100 using operating system comprising Unix, Linux, Windows 95, 98, NT, etc. (computer software is operable within a multi-tasking computer system). See col.7, lines 7-18. Therefore, it would have been obvious to one ordinary skill in the art for the user computer in **Kaffine et al.** to use any of the operating systems comprising Unix, Linux, Windows 95, 98, NT, etc. The reason is that operating system of a computer comprises a set of soft ware programs that perform tasks desired by a user.

In claims 18 and 35, **Kaffine et al.** does not disclose the computer software, firmware is automatically launched when the computer is booted. **Welder** discloses, in Fig.3, when a computer 100 is powered on, user computer 100 uses icons to automatically launch preinstalled programs (computer software is automatically launched when the computer is booted). See col.8, lines 17-20 & lines 57-65. Therefore, it would have been obvious to one ordinary skill in the art to implement the method of launching preinstalled program into **Kaffine et al.** by preinstalling testing programs in user computer so that when the user computer is first booted, the loaded programs is automatically launched to perform the testing for network connectivity.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Badt et al. (US Pat. No. 5,959,974) discloses System and Method for Discovering Path MTU of Internet Paths.

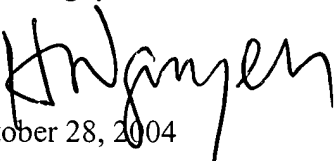Kanamaru et al. (US Pat. No. 6,574,197 B1) discloses Network Monitoring Device.

Tosey et al. (US pat. No. 6,392,990 B1) discloses Method for Implementing Interface

Redundancy in a Computer network.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Hanh Nguyen whose telephone number is 703 306-5445. The

examiner can normally be reached on Monday-Friday from 8AM to 5PM. The examiner can

also be reached on alternate

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hassan Kizou, can be reached on 703 305-4744. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh Nguyen

October 28, 2004